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Docket No.: VRT0106US

October 19, 2004

Commissioner For Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Re: Applicant(s): Oleg Kiselev  
Assignee: VERITAS Operating Corporation  
Title: Remote Data Access For Local Operations  
Serial No.: 10/722,701  
Examiner: Unassigned  
Docket No.: VRT0106US

Filed: November 25, 2003  
Group Art Unit: 3629

Dear Sir:

Transmitted herewith are the following documents in the above-identified application:

- (1) Return Receipt Postcard;
- (2) This Transmittal Letter (1 page) (*in duplicate*);
- (3) Petition to Make Special Under 37 CFR §1.102(d) (7 pages);
- (4) Copies of 4 references for accompanying Petition;
- (5) Information Disclosure Statement Under 37 CFR §1.97(b) (1 page);
- (6) PTO 1449 (citing 13 references) (1 page).

**FEES**

<input checked="" type="checkbox"/> Fee Under 37 CFR § 1.17(h) for Filing A Petition to Make Special	<u>130.00</u>
<input checked="" type="checkbox"/> Conditional Petition for Extension of Time: If an extension of time is required for timely filing of the enclosed document(s) after all papers filed with this transmittal have been considered, an extension of time is hereby requested.	
<input checked="" type="checkbox"/> Please charge our Deposit Account No. 502306 in the amount of	\$ <u>130.00</u>
<input checked="" type="checkbox"/> Also, charge any additional fees required and credit any overpayment to our Deposit Account No. 502306.	

Total: \$ 130.00

**EXPRESS MAIL NUMBER:**

EV 304740306 US

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Oleg Kiselev  
 Assignee: VERITAS Operating Corporation  
 Title: Remote Data Access For Local Operations  
 Serial No.: 10/722,701 Filing Date: November 25, 2003  
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Austin, Texas  
October 19, 2004

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 P.O. Box 1450  
 Alexandria, VA 22313-1450

**PETITION TO MAKE SPECIAL UNDER 37 CFR §1.102(d)**

Dear Sir:

The applicants hereby petition pursuant to 37 CFR §1.102(d) and MPEP § 708.02(VIII) to make the above-identified application special. Please charge Deposit Account No. 502306 the fee of \$130.00 for this petition as set forth in 37 CFR §1.17(h).

Should the Office determine that all the claims contained in the accompanying preliminary amendment are not obviously directed to a single invention, the applicants will make an election without traverse as a prerequisite to the grant of special status.

The applicants respectfully submit that a pre-examination search has been performed by a professional search firm in the following classes/subclasses:

<u>Class</u>	<u>Subclasses</u>
707	202
714	6, 16, 17

Enclosed are copies of the following references which are presently believed to be, from among those made of record in the accompanying Information Disclosure

Statement and any previously filed Information Disclosure Statement, the most closely related to the subject matter encompassed by the claims:

US 2003/0031176 A1

US 2003/0149736 A1

US 2003/0131278

U.S. Patent No. 6,643,671 B2

**Detailed Discussion of the References**

U.S. Patent Application Publication 2003/0031176 A1 (Sim) discloses a method and apparatus for distributing a large payload file to a plurality of storage devices in a network. Components of a Scalable Content Delivery Network (SCDN) selectively partition large payload files into blocks. (See the section entitled “Decomposing Large Files” in paragraphs 91 through 97). The blocks are distributed to a plurality of distribution stations at the edge of the network, which are located in the network to provide efficient delivery to end-user systems. (See Fig. 13 and the section entitled “Distributing Large Payload Files” in paragraphs 115 through 121.) Different pieces of a large payload file may be available from different nodes; however, when a user requests to read the large payload file, for example, through an application server, a virtual file control system creates an illusion that the entire file is present at the connected node. (See the section entitled “Accessing Large Payload Files” in paragraphs 122 through 127.) Non-resident portions of the file are pulled from different distribution servers in the SCDN and stored locally as the Application Server delivers the file to the end user. (See paragraph 124). Consequently, the entire file is copied to the local Application Server to enable the user to read the file.

While Sim involves assembling a file from portions of the file stored at various nodes, Sim does not teach “receiving a request to read *a portion of data* from first data storage, wherein a first host can access the first data storage, and the first host cannot access second data storage” and “requesting *a requested portion of a copy of the data* from a second host that can access the second data storage,” as required by independent claim 1, and as generally required by independent claims 13, 16, and 19. The claimed invention allows satisfying a read request by reading different portions of the data from copies of the data that reside at both the primary and remote locations, and does not require assembling the entire file at one location as Sims does. (See Sim, paragraph 124). Furthermore, Sim does not teach different access levels for different servers as in the limitation “wherein the first host cannot access the second data storage.” Accordingly, Applicants respectfully submit that claims 1-21 are allowable over Sim.

U.S. Patent Application Publication 2003/0149736 A1 (Berkowitz) discloses a system and method of transporting volumes of information from one host computer system to another using point-in-time copies of logical units (referred to as LUNs (from the logical unit numbers that uniquely identify the logical units)) but wherein the hardware provider does not necessarily understand the volume configuration of the data.

A storage subsystem module stores data for at least one host computer system, wherein the data is generally stored in one or more logical units (designated as LUNs). (See paragraph 12 and Fig. 3.) A requestor module requests the transportation of data stored in the storage subsystem, where the transportation involves the transfer of information from a first host computer system to a second host computer system. (Id.) The requesting module requests the transportation of a volume of information stored on a portion of one or more LUNs. A point-in-time copy interface module receives the request and generates an instruction to create a point-in-time copy, where the instruction includes identification information for the LUNs having portions of the volumes to be copied. (Id.) A provider module receives the instruction and creates the point-in-time copy. The provider module provides mapping information to the point-in-time copy interface related to location information for the point-in-time copy. (Id.) Therefore, the point-in-time copy interface layer communicates with both a requesting host computer system and a hardware provider to enable the transfer of volumes of information without requiring that the hardware provider understand the volume information.

While Berkowitz involves identifying and transferring portions of data from LUNs in a storage device from one host to another, Berkowitz does not teach “receiving a request to read a portion of data from first data storage, wherein a first host can access the first data storage, and the first host cannot access second data storage,” “requesting a requested portion of a copy of the data from a second host that can access the second data storage,” and “reading the requested portion received from the second host, and if a sub-portion of the portion of the data is available from the first data storage and the sub-portion was not included in the requested portion, reading the sub-portion from the first data storage,” as required by independent claim 1, and as generally required by independent claims 13, 16, and 19. The claimed invention allows satisfying a read request by reading different portions of the data from each of the primary and remote

locations. In contrast, Berkowitz teaches reading from an original volume (such as volume 303 of Fig. 3) or a point-in-time copy of the volume (such as copy 318 of Fig. 3), but not portions from each. Furthermore, Berkowitz does not address different hosts having different levels of access to storage areas. Accordingly, Applicants respectfully submit that claims 1-21 are allowable over Berkowitz.

U.S. Patent Application Publication 2003/0131278 (Fujibayashi) discloses a method for remote backup including techniques for multiple generation remote backup and fast restoration capabilities. The method includes backing up a primary storage device to a secondary storage device at a remote location; making a snapshot backup of the secondary storage device at the remote location; making a snapshot backup of the primary storage device at the local location; and repeating the above steps to create additional generations of snapshots over time. (See paragraph 9). This process ensures that, for each generation, an identical snapshot resides at both local and remote sites. (Id.) A method for fast restore uses a selected snapshot located at the first location to restore data. If the selected snapshot at the first (primary) location is not available, the selected snapshot at the second (remote) location is used to restore the primary data. (See paragraph 10).

While Fujibayashi operates in an environment similar to that of the present invention (see, e.g., Fig. 1), the restore process of Fujibayashi reads data from *either* the primary location or the remote location. (See paragraph 10). In particular, Fujibayashi does not teach “reading the requested portion received from the second host, and if a sub-portion of the portion of the data is available from the first data storage and the sub-portion was not included in the requested portion, reading the sub-portion from the first data storage,” as required by independent claims 1, 13, 16, and 19. Nor does Fujibayashi teach the first and second hosts having different levels of access to the first and second data storage, as also required by independent claims 1, 13, 16, and 19. Accordingly, Applicants respectfully submit that claims 1-21 are allowable over Fujibayashi.

U.S. Patent No. 6,643,671 B2 (Milillo) provides a system and method for synchronizing copies of data at local and remote locations. A synchronous copy mechanism referred to as peer-to-peer remote copy (PPRC) is used to create a copy of

data at a remote or secondary storage system. (See column 1, lines 34-36). The copy of the data located at the secondary storage system is kept up-to-date with the data at the primary storage system as viewed by the user of the data. (See column 1, lines 34-47). In one embodiment, two remote copy trios are maintained, each remote copy trio including a source, target, and secondary volume. (See Fig. 4 and column 13, lines 21-32). Upon establishing a PPRC source and target volume pair, an internal snapshot copy synchronizes the source and primary target volumes. (See column 2, lines 56-67). The source volume establishes a bitmap and begins accumulating write commands received from a host. (Id.) Subsequent snapshot copies from the source volume to the primary target volume only snapshot copy data indicated by the accumulated write commands. (Id.) Only data indicated by the accumulated write commands is migrated to the secondary volume. (Id.)

While Milillo addresses the need for synchronizing data between primary and secondary / remote data volumes, Milillo does not address “reading the requested portion received from the second host, and if a sub-portion of the portion of the data is available from the first data storage and the sub-portion was not included in the requested portion, reading the sub-portion from the first data storage,” as required by independent claims 1, 13, 16, and 19. Nor does Milillo teach the first and second hosts having different levels of access to the first and second data storage, as also required by independent claims 1, 13, 16, and 19. Accordingly, Applicants respectfully submit that claims 1-21 are allowable over Milillo.

CONCLUSION

Applicants respectfully request that this petition be granted, and that the present application receive expedited examination. Should any issues remain that might be subject to resolution through a telephonic interview, the Office is requested to telephone the undersigned.

<b>EXPRESS MAIL NUMBER:</b>
EV 304740306 US

Respectfully submitted,



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